

## CLAIMS

1. A process for preparing cyclic organohydrogensiloxanes comprising:  
(A) contacting a silane of the formula  $\text{RHSiCl}_2$ , where R is selected from alkyl radicals having 1 to 12 carbon atoms and aryl radicals, with water to form a hydrolyzate comprising cyclic organohydrogensiloxanes and linear organohydrogensiloxanes, and (B) contacting the hydrolyzate with an acidic rearrangement catalyst in the presence of an inert liquid diluent to increase the ratio of the cyclic organohydrogensiloxanes to linear organohydrogensiloxanes in the hydrolyzate, characterised in that the acidic rearrangement catalyst is an organic compound containing a strong acid group which is dissolved in the inert diluent present.
2. A process according to Claim 1, characterised in that the acidic rearrangement catalyst is a sulphonic acid.
3. A process according to Claim 2, characterised in that the sulphonic acid is an alkylaryl sulphonic acid.
4. A process according to Claim 3, characterised in that the sulphonic acid is dodecylbenzenesulphonic acid.
5. A process according to any one of Claims 1 to 4, characterised in that the process is a continuous process including the steps of (C) recovering the cyclic methylhydrogensiloxanes by separation from the linear methylhydrogensiloxanes and diluent, and (D) recycling the linear methylhydrogensiloxanes and diluent containing dissolved acidic rearrangement catalyst from Step (C) to Step (B).
6. A process according to any one of Claims 1 to 5, characterised in that the concentration of acidic rearrangement catalyst in the diluent is in the range 0.05 to 5% by weight.